

Appl. No. 10/697,832
Amdt. Dated 17 Aug 2005
Reply to Office Action of 18 May 2005

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-4 (cancelled)

Claim 5 (currently amended): A method for automatically adjusting parameters of signal emitter of a synchronous high-speed transmission system wherein controller of signal receiver could transmit information to the controller of said signal emitter. said method comprising:

- selecting a first subset of values in a predetermined set of values;
- sending a request to said controller of said signal emitting means for setting said parameters to the values of said selected subset;
- evaluating the quality of the signal received by said signal receiver;
- if all subsets of said predetermined set of values have been selected, determining the subset corresponding to the best signal quality and sending a request to said controller of said signal emitter for setting said parameters to the values of said determined subset.

wherein said receiver comprises a sampler controlled by a phase rotator, wherein said evaluating the quality of the received signal comprises determining a digital eye, wherein said digital eye characterizes the positions whereat transitions of said received signal have been detected, and The method of claim 4 wherein said digital eye is determined by:

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setting said phase rotator in a first position;
initializing a partial value associated to said phase rotator position;
sampling the received signal;
XORing said sample and said sample shifted by 1 bit;
ORing the result of said XOR operation with said partial result associated to said
phase rotator position;
replacing the value of said partial result associated to said phase rotator position by the
result of said OR operation;
repeating the last four steps during a predetermined time;
setting said phase rotator in a second position and repeating the last six steps; and,
combining said partial results associated to said first and second positions.

Claim 6 (previously presented): The method of claim 5 wherein the phase rotator is
set to all its possible positions, a partial result being determined for each position of said
phase rotator, and said digital eye being determined by the combination of said partial
results.

Claim 7 (previously presented): The method of claim 5 wherein said step of
combining said partial results comprises the steps of:

emptying a value representing the digital eye, setting a bit position to the number of
bits of said partial results and setting a phase rotator position value to the value of the
first position reached by said phase rotator;

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selecting the bit of the partial result associated to said phase rotator position value,
located at said bit position;
merging said selected bit to said value representing the digital eye;
if said selected bit is part of the partial result associated to the last position of said
phase rotator,
if said selected bit is the first bit of the partial result, ending said combining step;
else, decreasing said bit position by one, setting said phase rotator position value to the
value of the first position reached by said phase rotator and repeating the last four
steps;
else, increasing said phase rotator position value by one and repeating the last five
steps.

Claim 8 (previously presented): The method of claim 5 further comprising
correcting the digital eye:

if said shifting is a right shifting, suppressing a number n of consecutive bits equal to
one, from the right, for each set of consecutive bits equal to one; or,
if said shifting is a left shifting, suppressing a number n of consecutive bits equal to
one, from the left, for each set of consecutive bits equal to one,
wherein n is the number of position reached by said phase rotator, minus one.

Claims 9-21 (cancelled)